What is claimed is:

1. A method for statistical multiplexing of a plurality of data streams, comprising:

communicating a bandwidth request message from each of a plurality of encoders to a second stage multiplexer;

allocating available bandwidth at said second stage multiplexer based on said bandwidth request messages;

communicating an allocated bandwidth message to each of said encoders which contains an allocated bandwidth for each encoder based on said allocating;

encoding a data stream at each encoder in accordance with the allocated bandwidth for that encoder to provide an encoded data stream from each encoder;

multiplexing a plurality of said encoded data streams at a first stage multiplexer to provide a multiplexed data stream at a constant data rate; and

multiplexing at said second stage multiplexer a plurality of said multiplexed data streams from a plurality of said first stage multiplexers to provide a multiplexed transport stream.

2. A method in accordance with claim 1, wherein:

each of said bandwidth request messages is based on a video complexity level of the content to be encoded.

3. A method in accordance with claim 1, further comprising:

periodically reallocating said bandwidth based on newly received bandwidth request messages.

4. A method in accordance with claim 1, further comprising:

providing a number of null packets to said plurality of encoded data streams at said first stage multiplexer in the event that a total bandwidth allocated to the encoders associated with said first stage multiplexer is less than said constant data rate; and

stripping off said null packets from said multiplexed data stream at said second stage multiplexer.

5. A method in accordance with claim 4, further comprising:

providing an amount of additional data to said first stage multiplexer; and

reducing said number of null packets corresponding to said amount of additional data.

6. A method in accordance with claim 4, wherein said data streams comprise television services.

7. A method in accordance with claim 6, further comprising:

adding or deleting services at said first stage multiplexer; and

adding or deleting a number of null packets corresponding to said adding or deleting of said services.

8. A method in accordance with claim 6, further comprising:

activating or deactivating services at said first stage multiplexer;

adding or deleting a number of null packets corresponding to said activating or deactivating of said services.

9. A method in accordance with claim 6, further comprising:

changing bandwidth allocated to the services at said first stage multiplexer while maintaining said constant data rate.

10. A method in accordance with claim 4, wherein:

a total data rate output from said plurality of first stage multiplexers, including said null packets, is greater than said available bandwidth of said second stage multiplexer.

11. A method in accordance with claim 1, further comprising:

providing a dedicated control channel between said encoders and said second stage multiplexer for sending said bandwidth request messages and said allocated bandwidth messages.

12. A method in accordance with claim 11, further comprising:

partitioning said dedicated control channel into a plurality of subnets.

13. An apparatus for statistical multiplexing of a plurality of data streams, comprising:

a plurality of first stage multiplexers;

a plurality of encoders operatively associated with each first stage multiplexer;

a second stage multiplexer operatively associated with said plurality of first stage multiplexers; and

a statmux control processor operatively associated with said second stage multiplexer;

wherein:

a bandwidth request message is communicated from each of said encoders to said statmux control processor;

said stamux control processor allocates available bandwidth based on said bandwidth request messages;

said statmux control processor communicates an allocated bandwidth message to each of said encoders which contains an allocated bandwidth for each of said encoders based on said allocating;

each of said encoders encodes a data stream in accordance with the allocated bandwidth for that encoder, providing an encoded data stream from each encoder;

each of said first stage multiplexers multiplexes a plurality of said encoded data streams from the encoders associated therewith, providing a multiplexed data stream at a constant data rate from each of said first stage multiplexers; and

said second stage multiplexer multiplexes a plurality of said multiplexed data streams from said first stage multiplexers to provide a multiplexed transport stream.

14. Apparatus in accordance with claim 13, wherein:

each of said bandwidth request messages is based on a video complexity level of the content to be encoded.

15. Apparatus in accordance with claim 13, further comprising:

said statmux control processor periodically reallocates said bandwidth based on newly received bandwidth request messages.

16. Apparatus in accordance with claim 13, wherein:

a number of null packets are provided to said plurality of encoded data streams at one of said first stage multiplexers in the event that a total bandwidth allocated to the encoders associated with that first stage multiplexer is less than said constant data rate; and

said null packets are stripped off from said multiplexed data stream at said second stage multiplexer.

17. Apparatus in accordance with claim 16, wherein:

an amount of additional data is provided to said first stage multiplexer; and

said number of null packets is reduced corresponding to said amount of additional data.

18. Apparatus in accordance with claim 16, wherein said data streams comprise television services.

19. Apparatus in accordance with claim 18, wherein:

services are added or deleted at said first stage multiplexers; and

a number of null packets are added or deleted corresponding to said added or deleted services.

20. Apparatus in accordance with claim 18, further comprising:

services are activated or deactivated at said first stage multiplexers;

a number of null packets are added or deleted corresponding to said activated or deactivated services.

21. Apparatus in accordance with claim 18, wherein:

bandwidth allocated to the services is changed at said first stage multiplexers while maintaining said constant data rate.

22. Apparatus in accordance with claim 16, wherein:

a total data rate output from said plurality of first stage multiplexers, including said null packets, is greater than said available bandwidth of said second stage multiplexer.

23. Apparatus in accordance with claim 13, further comprising:

a dedicated control channel between said encoders and said statmux control processor for sending said bandwidth request messages and said allocated bandwidth messages.

24. Apparatus in accordance with claim 23, wherein:

said dedicated control channel comprises a plurality of subnets.